Using **Gamification** to Motivate Children to Complete **Empirical Studies** in Lab Environments

Robin Brewer | Lisa Anthony | Quincy Brown

Germaine Irwin | Jaye Nias | Berthel Tate

UMBC + Bowie State University

---

**STUDY 1**

**METHODS**
- 7 children, ages 5-7
- M = 6 years
- Target task
- Gesture tasks
- $10 compensation
- 1 hour sessions

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gesture</td>
<td>61%</td>
<td>27%</td>
<td>2/7</td>
</tr>
<tr>
<td>Target</td>
<td>85%</td>
<td>26%</td>
<td>5/7</td>
</tr>
<tr>
<td>Overall</td>
<td>73%</td>
<td>23%</td>
<td>2/7</td>
</tr>
</tbody>
</table>

**STUDY 2**

**METHODS**
- 7 children, ages 5-7
- M = 6 years
- Target task w/ points
- Gesture tasks w/ points
- $10 compensation
- 1 hour sessions
- Earned prizes based on completion

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gesture</td>
<td>95%</td>
<td>13%</td>
<td>6/7</td>
</tr>
<tr>
<td>Target</td>
<td>100%</td>
<td>0%</td>
<td>6/6</td>
</tr>
<tr>
<td>Overall</td>
<td>97%</td>
<td>7%</td>
<td>5/6</td>
</tr>
</tbody>
</table>

**MOTIVATION**
- Few empirical research studies with children
- Lab environments may be preferable to certain study designs
- Crucial to study younger ages due to differences in cognitive and physical ability, compared to adults

**CHALLENGES**
- Asking for breaks
- Declining to complete activity
- Siblings in same room as a distraction

- Attributed to study length and attention span of the children

**IMPLICATIONS FOR DESIGN**
- Use a number of gamification elements such as points, prizes, or game design heuristics
- Personalize motivating elements to the individual child
- Avoid conducting sessions with children who know each other
- Consider a balance of distraction in controlled environments